

IN THE CLAIMS:

Please cancel claims 237-265 and 438, without prejudice or disclaimer, and amend the claims as shown below.

1-236. (Previously cancelled)

237. (Currently cancelled) Nanoparticle-oligonucleotide conjugates which are nanoparticles having oligonucleotides attached to them, the oligonucleotides being present on a surface of the nanoparticles at a surface density sufficient so that the conjugates are stable, at least some of the oligonucleotides having a sequence complementary to at least one portion of the sequence of a nucleic acid or another oligonucleotide..

238. (Currently cancelled) The conjugates of Claim 237 wherein the oligonucleotides are present on the surface of the nanoparticles at a surface density of at least 10 picomoles/cm²

239. (Currently cancelled) The nanoparticles of Claim 238 wherein the oligonucleotides are present on the surface of the nanoparticles at a surface density of at least 15 picomoles/cm².

240. (Currently cancelled) The nanoparticles of Claim 239 wherein the oligonucleotides are present on the surface of the nanoparticles at a surface density of from about 15 picomoles/cm² to about 40 picomoles/cm².

241. (Currently cancelled) The nanoparticles of Claim 237 wherein the nanoparticles are metal nanoparticles or semiconductor nanoparticles.

242. (Currently cancelled) The nanoparticles of Claim 241 wherein the nanoparticles are gold nanoparticles.

243. (Currently cancelled) Nanoparticles having oligonucleotides attached to them, the oligonucleotides comprising at least one type of recognition oligonucleotides, each of the recognition oligonucleotides comprising a spacer portion and a recognition portion, the spacer portion being designed so that it is bound to the nanoparticles, the recognition portion having a sequence complementary to at least one portion of the sequence of a nucleic acid or another oligonucleotide.

244. (Currently cancelled) The nanoparticles of Claim 243 wherein the spacer portion has a moiety covalently bound to it, the moiety comprising a functional group through which the spacer portion is bound to the nanoparticles.

245. (Currently cancelled) The nanoparticles of Claim 243 wherein the spacer portion comprises at least about 10 nucleotides.

246. (Currently cancelled) The nanoparticles of Claim 245 wherein the spacer portion comprises from about 10 to about 30 nucleotides.

247. (Currently cancelled) The nanoparticles of Claim 243 wherein the bases of the nucleotides of the spacer portion are all adenines, all thymines, all cytosines, all uracils or all guanines.

248. (Currently cancelled) The nanoparticles of Claim 243 wherein the oligonucleotides are present on surface of the nanoparticles at a surface density of at least 10 picomoles/cm².

249. (Currently cancelled) The nanoparticles of Claim 248 wherein the oligonucleotides are present on surface of the nanoparticles at a surface density of at least 15 picomoles/cm².

250. (Currently cancelled) The nanoparticles of Claim 249 wherein the oligonucleotides are present on surface of the nanoparticles at a surface density of from about 15 picomoles/cm² to about 40 picomoles/cm².

251. (Currently cancelled) The nanoparticles of Claim 243 wherein the nanoparticles are metal nanoparticles or semiconductor nanoparticles.

252. (Currently cancelled) The nanoparticles of Claim 251 wherein the nanoparticles are gold nanoparticles.

253. (Currently cancelled) Nanoparticles having oligonucleotides attached to them, the oligonucleotides comprising:

at least one type of recognition oligonucleotides, each of the types of recognition oligonucleotides comprising a sequence complementary to at least one portion of the sequence of a nucleic acid or another oligonucleotide; and

a type of diluent oligonucleotides.

254. (Currently cancelled) The nanoparticles of Claim 253 wherein each of the recognition oligonucleotides comprises a spacer portion and a recognition portion, the spacer portion being designed so that it is bound to the nanoparticles, the recognition portion having a sequence complementary to at least one portion of the sequence of a nucleic acid or another oligonucleotide.

255. (Currently cancelled) The nanoparticles of Claim 254 wherein the spacer portion has a moiety covalently bound to it, the moiety comprising a functional group through which the spacer portion is bound to the nanoparticles.

256. (Currently cancelled) The nanoparticles of Claim 254 wherein the spacer portion comprises at least about 10 nucleotides.

257. (Currently cancelled) The nanoparticles of Claim 256 wherein the spacer portion comprises from about 10 to about 30 nucleotides.

258. (Currently cancelled) The nanoparticles of Claim 254 wherein the bases of the nucleotides of the spacer portion are all adenines, all thymines, all cytosines, all uracils or all guanines.

259. (Currently cancelled) The nanoparticles of Claim 253 wherein the oligonucleotides are present on surface of the nanoparticles at a surface density of at least 10 picomoles/cm².

260. (Currently cancelled) The nanoparticles of Claim 259 wherein the oligonucleotides are present on surface of the nanoparticles at a surface density of at least 15 picomoles/cm².

261. (Currently cancelled) The nanoparticles of Claim 260 wherein the oligonucleotides are present on surface of the nanoparticles at a surface density of from about 15 picomoles/cm² to about 40 picomoles/cm².

262. (Currently cancelled) The nanoparticles of Claim 254 wherein the diluent oligonucleotides contain about the same number of nucleotides as are contained in the spacer portions of the recognition oligonucleotides.

263. (Currently cancelled) The nanoparticles of Claim 262 wherein the sequence of the diluent oligonucleotides is the same as that of the spacer portions of the recognition oligonucleotides.

264. (Currently cancelled) The nanoparticles of Claim 253 wherein the nanoparticles are metal nanoparticles or semiconductor nanoparticles.

265. (Currently cancelled) The nanoparticles of Claim 264 wherein the nanoparticles are gold nanoparticles.

266-432. (Previously cancelled)

433. (Currently amended) Nanoparticles having at least two types of oligonucleotides attached thereto, the oligonucleotides being present on a surface of the nanoparticles at a surface density of at least 10 picomoles/cm², wherein at least [some of the] one type of oligonucleotides comprises recognition oligonucleotides, the recognition oligonucleotides comprising a recognition portion having a sequence complementary to at least one portion of the sequence of a nucleic acid or another oligonucleotide.

434. (Previously added) The nanoparticles of Claim 433 wherein the oligonucleotides are present on the surface of the nanoparticles at a surface density of at least 15 picomoles/cm².

435. (Previously added) The nanoparticles of Claim 433 wherein the oligonucleotides are present on the surface of the nanoparticles at a surface density from about 15 picomoles/cm² to about 40 picomoles/cm².

436. (Previously added) The nanoparticles of Claim 433 wherein the nanoparticles are metal nanoparticles or semiconductor nanoparticles.

437. (Previously added) The nanoparticles of Claim 436 wherein the nanoparticles are gold nanoparticles.

438. (Currently cancelled) The nanoparticles of Claim 433 wherein at least one type of oligonucleotides comprises recognition oligonucleotides, the recognition portion having a sequence complementary to at least one portion of the sequence of a nucleic acid or another oligonucleotide.

439. (Currently amended) The nanoparticles of Claim [438] 433 wherein each of the recognition oligonucleotides comprising a spacer portion and a recognition portion, the spacer portion being designed so that it is bound to the nanoparticles.

440. (Previously added) The nanoparticles of Claim 439 wherein the spacer portion has a moiety covalently bound to it, the moiety comprising a functional group through which the spacer portion is bound to the nanoparticles.

441. (Previously added) The nanoparticles of Claim 439 wherein the spacer portion comprises at least about 10 nucleotides.

442. (Previously added) The nanoparticles of Claim 441 wherein the spacer portion comprises from about 10 to about 30 nucleotides.

443. (Previously added) The nanoparticles of Claim 439 wherein the bases of the nucleotides of the spacer portion are all adenines, all thymines, all cytosines, all uracils or all guanines.

444. (Currently amended) The nanoparticles of [any one of] Claim[s] 433 [or 438] wherein at least one type of oligonucleotides comprise diluent oligonucleotides .

445. (Previously added) The nanoparticles of Claim 444 wherein the diluent oligonucleotides contain about the same number of nucleotides as are contained in the spacer portions of the recognition oligonucleotides.

446. (Previously added) The nanoparticles of Claim 445 wherein the sequence of the diluent oligonucleotides is the same as that of the spacer portions of the recognition oligonucleotides.